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Carol Kimbrough
Ouachita Baptist University

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ENVIRONMENT--A CAUSE OF MENTAL RETARDATION

An Honors
Special Studies Paper
Prepared for
Mrs. Sandford
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Carol Kimbrough
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ENVIRONMENT--A CAUSE OF MENTAL RETARDATION

This paper is concerned with six million special Americans for whom--and for whose families--our national accomplishment has been great. . .and far too little.

The six million are the nation's mentally retarded. They are as many as the combined populations of Maine, Oregon, Mississippi, North Dakota, and Wyoming. They are as many people as live in Los Angeles and Chicago together. Their number would make 12 Indianapolises, 24 Wichitas, 48 Winston-Salems.¹

There are 126,000 mentally retarded children born each year in the United States. This is a rate of one every five minutes. Of every 1000 births that take place, thirty of these are born mentally retarded.²

These special Americans are people who are limited in what they can do and understand and achieve. They are slower to learn than most. They have greater difficulty in coping with swift change and life's growing complexity.

¹President's Committee on Mental Retardation, MR 67, (Washington: 1967) p. 1.

²Wingfield, Clinton, "Mental Retardation", Speech, May 14, 1968.

But they are not helpless or hopeless.

Mental retardation is a condition where the brain is prevented from reaching full development, limiting the victim's ability to learn and put learning to use and retarding social adjustment. It handicaps an estimated three per cent of our population or almost six million Americans. It is a handicap that ranges from slightly impaired development to complete disability. Cited as the number one health problem among children today, it is also one of our greatest challenges.

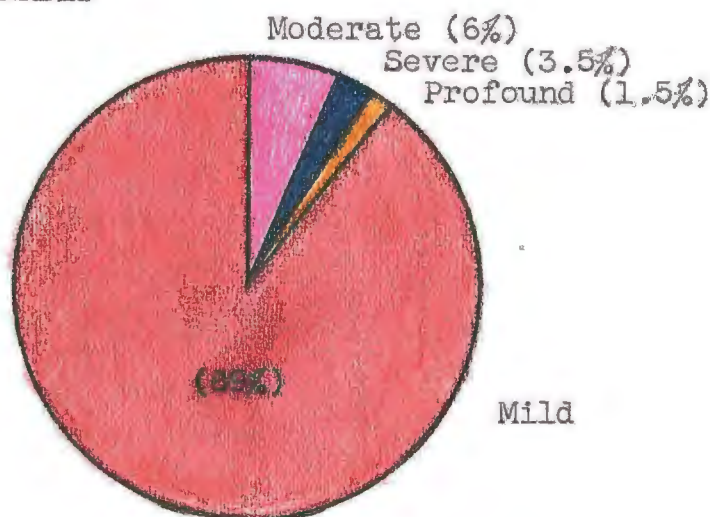
From a sociological point of view, mental retardation is a condition that affects the individual's ability to perform his social roles. But, it is not just that since many physical handicaps also prevent the afflicted person from performing his social roles fully. In addition, mental retardation results in behavior that is considered deviant from the norm and which is thought to be caused by an "abnormal" mental condition. The severity of the disorder is simply the extent to which these behaviors interfere with the person's own functioning and/or the functioning of others.³

Mental retardation is divided into four categories--mild, moderate, severe, and profound, depending on scores made on standard I.Q. tests and level of functioning. The vast majority of retardates fall into the mild classification. Nearly 90 per cent (89 per cent to be exact) of

³Gold and Scarpitti, *Combatting*, p. 245.

all retardates are classified as mild with the 11 per cent in the remaining three categories. (See the chart below.)

CLASSIFICATION OF THE
MENTALLY RETARDED
POPULATION⁴



Their intelligence quotients range from 65 to 75 (mild). An I.Q. of 100 is considered normal. Moderate retardates have I.Q.'s of 50 to 65 and possess a functional impairment which requires special training and guidance. Severe and profound retardates have I.Q.'s of 35 and below.⁵

Mild retardates very often appear to be normal, but may have speech impairments, a slightly unsteady gait, and other minor motor difficulties, such as inability to thread a needle. According to Dr. Margaret J. Giannini, administrative director of the Clinic for Mental Retardation in New York, "The one quality that separates the mildly re-

⁴President's Committee, MR 67, p. 1.

⁵Gold and Scarpitti, Combatting, p. 246.

tarded from the rest of us is their inability at times to make sound judgements." Mild retardates, however, can learn to read and write up to the sixth grade level, they can learn fairly complex jobs, do productive work, and can become almost completely self-sufficient. The moderate retardates can be taught relatively simple skills, and some can hold down simple undemanding jobs. They can learn to care for themselves and do simple tasks. In the severe and profound categories, many retardates are incapable of caring for themselves and require fulltime institutional care. Although psychological test scores are widely used in estimating the degree of intellectual defect, an equally important criterion is the ability of the person to function in a socially adequate manner.

Mental retardation occurs in every country and among all peoples. No social or economic class of persons is free of it.

Mentally retarded persons may be confused, unhappy, depressed, and uncertain about themselves. On the other hand, they may be happy, energetic, loving, warm, and full of that pure joy that goes along with loving life. Sometimes they withdraw into their own make-believe world, and become only dimly aware of what goes on around them. In the most serious stages, people may cause physical harm to themselves or to others.

Medical science knows neither specific causes of all kinds of mental disorders nor specific ways of preventing them. Mental disorders are sometimes related to defects in the brain that may result from various causes. Some defects may be congerital. That is, they occur before birth. Or, the defects may be accidental, as when brain injury occurs during the birth process.

Accidental brain damage from injury to the head may also occur after birth, and cause mental disorders. Hardening of the arteries, a disease of old age, may harm the nerve cells of the brain, because the blood does not flow properly to the brain. Sometimes the brain cells simply wear out, as in senility, and the mind does not function properly. Poisons from body infections may harm the brain or infection may occur in the brain itself. Disorders in body metabolism such as too little sugar in the blood, may affect the way the mind functions. Some experts believe that defects in the adrenal glands may also affect the mind. Other researchers believe the chemical and metabolic disturbances may occur in the brain and cause certain mental disorders.

Most mental disorders occur without any apparent brain damage. Some psychiatrists believe that heredity may cause such conditions. The influence of heredity in mental retardation is difficult to prove, however.

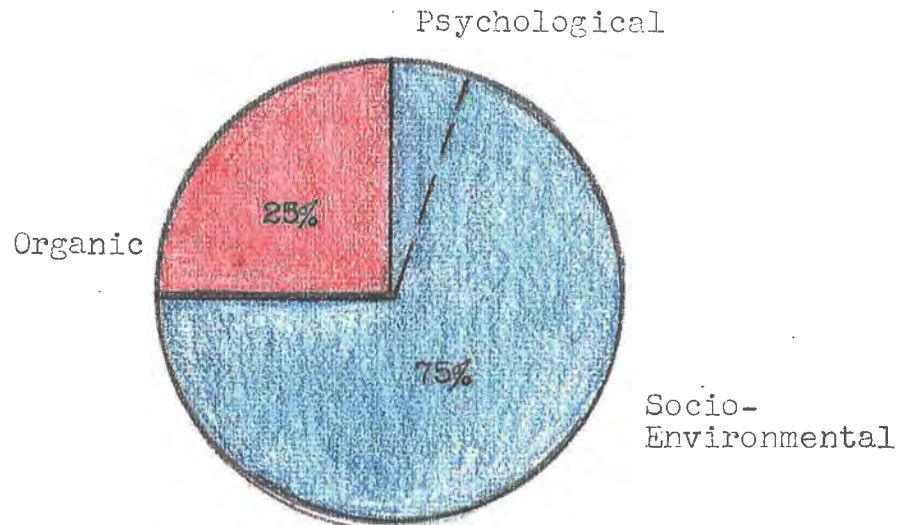
Experts believe that early family life influences the development of some mental disorders. A happy home life during the first years may do more than anything else to prevent many mental illnesses. Many psychiatrists believe that childhood experiences help cause mental illness. They believe that overprotection or frustration during the first year or two of life can make a person maladjusted, or unable to face later difficulties. It is thought that the environment, especially the deprivations of the slum, can adversely affect a child's intelligence at least temporarily. Thus, somehow causing impairment of brain centers involved in memory, perception, and conceptualization. The mild retardate, for example, understands a good deal, but has difficulty with abstraction, judgment, and evaluation.

Concern for the effects of the environment on the growth and development of the child is not new.⁶ Much research has been done to support the fact that environmental conditions can and do cause mental retardation. Studies in the area indicate that if the environment is not conducive to growth, development can be arrested.

⁶Joe Frost and Glern R. Hawkes, The Disadvantaged Child, (New York: 1966) p. 383.

The chart below, published by the President's Committee on Mental Retardation in 1967, shows that 75 per cent of all mental retardation is caused by a socio-environmental factor.

MENTAL RETARDATION
BY CAUSE



Sociocultural theories of the etiology of mental illness focus on general features of the culture which are thought to contribute to individual pathology. Just why particular environmental conditions contribute to emotional illness for some people and not for others is not known, but it is believed by many social scientists that cultural factors such as social isolation, role inconsistency and ambiguity, the complexity of contemporary society, and the inconsistency of modern culture have a direct bearing upon mental illness.⁷

⁷Gold and Scarpitti, Combatting, p. 249.

Faris and Dunham's social isolation theory is one of the best known sociocultural explanations of mental disorders.⁸ As a result of their work on the distribution of mental disorders in Chicago, they discovered that the highest rates were in the socially disorganized areas characterized by great impersonality and anonymity. In these areas, the population was heterogeneous, highly mobile and overwhelmingly lower class.

In my own three years of experience working with mentally retarded children, I have seen numerous cases in which the environment was the sole factor causing the child's retarded state. Most of these children come from low-income homes.

Numerous labels have been used to identify the children of the poor: culturally deprived, low socioeconomic group, economically restricted, socially disadvantaged, and the disadvantaged. More than a million children starting to school each fall are disadvantaged--victims of too little, too late. The impoverishment of their lives is so severe that failure is a natural consequence.

Disadvantage is a relative term. When we speak of a child as being socially disadvantaged we mean that he has a disadvantage relative to some other child for some kind of

⁸Gold and Scarpitti, Combatting, p. 249.

social life. The socially disadvantaged child is one who is handicapped in the task of growing up to lead a competent and satisfying life in the American society.⁹

In an educational context, "disadvantaged" refers to children with a particular set of educationally associated problems arising from and residing extensively within the culture of the poor. This is not to say that the ills restricting the intellectual, social, and physical growth of children tend to be concentrated here. We may change the name but the problems remain the same, passing from generation to generation and sustained by discrimination, lack of opportunity, and an exploding population. In 1950, approximately one child out of every ten in the fourteen largest cities of the United States was "culturally deprived." By 1960, this figure had risen to one in three. This ever increasing trend is due to their rapid migration to urban centers. By 1970, it is estimated there may be one deprived child for every two enrolled in schools in these large cities.¹⁰

From his birth, the child's environment has a strong effect upon his development.¹¹ Four common consequences

⁹Frost and Hawkes, Disadvantaged Child, p. 16.

¹⁰Frank Riessman, The Culturally Deprived Child, (New York: 1962) p. 1.

¹¹Mario D. Fantini and Gerald Weinstein, The Disadvantaged: Challenge to Education, (New York: 1968) p. 55.

of impoverished environmental conditions are school drop-outs, delinquency, mental retardation, and education retardation. Our purpose here is to examine the relationship that exists between mental retardation and one's environment.

A Duke University psychiatrist suggested that physical and mentally normal children can be transformed into retarded ones during the interval between their first and third birthdays. Since only one out of four mentally retarded individuals is handicapped as a consequence of known hereditary defects or other physical causes, 75 per cent of retardation may thus be environmental in origin.

Analyzing the reports of several experimental pre-school programs, Donald J. Stedman, research director of Duke University's Education Improvement Program in Durham, North Carolina, found that among children from deprived backgrounds nearly 80 per cent scored as "borderline retardates" when tested at school-entrance age, compared with only 15 per cent of children from all income levels. Stedman obtained the same low scores when he tested deprived Durham children between the ages of four and six. He next tested infants with similarly deprived backgrounds at the ages of one, three, six, nine, 12 and 15 months; their scores proved to be better than the national average.

Seeking out the specific environmental factors that may be responsible for retardation, Stedman points to studies in Mexico and elsewhere that show a correlation between malnutrition and intellectual underdevelopment. He believes that an effect of equal or greater importance is produced by an impoverished external environment on children from 12 to 36 months old. During these critical months, Stedman points out, the child's use of language accelerates, as does the associated intellectual experience of classifying in logical fashion the increasing number of things the child encounters in the surrounding world. Because the ability to classify depends on memory processes, tests of memory efficiency provide a sensitive measure of the child's intellectual growth. The children from deprived backgrounds enrolled in Duke's Education Improvement Program, Stedman reports, show a "horrendous" deficiency in this respect.¹²

It should be stressed here that the effects of a lower-class environment on a child's development may become even more serious during his fourth and fifth years. Furthermore, the longer these conditions continue, the more likely

¹²Donald J. Stedman, "Mental Retardation," Scientific American, (December, 1967) 217: 50.

the effects are to be lasting.¹³

Many disadvantaged children are placed in special classes for the mentally retarded. Most of these children suffer no apparent neurological defects but rather are mentally restricted by the impoverishment of their cultural experiences.

A study by Wakefield has revealed that a large proportion of the educable mentally retarded children in the public schools come from families of low intelligence, poor schooling, and inferior economic status, and concluded that a very large population of retarded individuals might owe their retardation to environmental factors.¹⁴

In an investigation of the effects of stimulation on mentally retarded children by Skeels, thirteen mentally retarded children (experimental group) were transformed at an early age to an institution which provided a personal relationship with adult mentally retarded women. Later, eleven of these children were transferred to adoptive homes. A control group of twelve children, initially at a higher level of intelligence, remained in a relatively unstimulating environment for a prolonged period. In the initial study the children in the experimental group showed a decided increase in rate of mental growth, while the control group

¹³Frost and Hawkes, Disadvantaged Child, p. 92.

¹⁴Frost, Child, p. 12.

showed progressive mental retardation.

In a follow-up study conducted after the children had reached adulthood, all subjects in the experimental group were found to be self-supporting, and none was a ward of any institution. Eleven of the thirteen were married, and nine had children. The median grade in school completed was the twelfth, and one girl who had an initial I.Q. of 35 had graduated from high school and taken one semester of college work. Of the twelve children in the control group, one died in adolescence following continued residence in a state institution for the mentally retarded, and four were still wards of institutions--one in a mental hospital and three in institutions for the mentally retarded. Only two of the group had married, and one of these was divorced. Two of the four females were sterilized in late adolescence. The cost of the state for this group had totaled about \$100,000. The median school grade completed was the third.¹⁵

As these studies and others show, environmental stimulation in a variety of forms ranging from mothering, to playing with manipulative play materials is essential for development during the pre-school years.

It should be kept in mind that very few problems in

¹⁵Frost and Hawkes, Disadvantaged Child, p. 13.

our society are as complex as the problems of cultural deprivation. The designation of cultural deprivation should not be equated with membership in an ethnic group, but should be defined in terms of characteristics of the individual and/or the characteristic of his environment.¹⁶ It should also be noted that cultural deprivation should not be equated with race. The Negro child who is culturally deprived has all the learning problems of other culturally deprived children. However, in addition to these problems he suffers from the special problems created by the prejudices and attitudes of others.¹⁷

The home environment has been studied as a means of understanding the factors which influence the development of children. Studies repeatedly show that the home is the single most important influence on the intellectual and emotional development of children, particularly in the preschool years.

It is what the parents do in the home rather than their status characteristics which are most influential on the achievement of their children. The ways in which parents spend time with their children at meals, in play, and at other times during the day have been found to be

¹⁶Benjamin S. Bloom, Allison Davis, Robert Hess, Compensatory Education for Cultural Deprivation, (New York: 1965) p. 5.

¹⁷Bloom, Compensatory, p. 29.

central factors in developing skills which prepare children for school. The objects in the home, the amount of parental interest in learning, and the amount of practice and encouragement the child is given in conversation and general learning have been found to be significant influences on language and cognitive development, development of interest in learning, attention span, and motivation of the child.

The negative side of the underprivileged family is easy to see: the family may be prematurely broken by divorce, desertion, and death; the home is overcrowded, the housing facilities inadequate; considerable economic insecurity prevails; both parents frequently work, and thus the children may be neglected; and typically the irritable, tired parents use physical punishment in order to maintain discipline. Many commentators have placed considerable importance on broken homes as the source of emotional instability, mental illness, juvenile delinquency, and the like.

Some of the main factors which affect the child's lack of readiness for school have already been mentioned. Another such factor is the lack of variety of stimulation in the home. Another handicap suffered by the culturally disadvantaged is their lack of books, pictures, magazines, and newspapers which are a major source of knowledge for middle-class children. The printed page is rarely encountered

by youngsters from disadvantaged backgrounds; yet print is the mainstay of schools, teachers, and the educational process in our culture. Learners who have had little or no contact with these media in their early years are at a disadvantage as soon as they enter learning situations which depend on oral and written language.¹⁸ There is much noise in the lower-class environment, but little direct communication and feedback. There is a lack of expectation of reward for performance and most tasks are motoric, have a short-time span, and are more likely to be related to concrete objects or services for people. According to Charles E. Silberman, author of Crisis in Black and White, the disadvantaged child misses about 85 per cent of what goes on in a formal classroom. Such children have not been trained to listen.¹⁹

Research has indicated that environmental factors are apparently decisive in producing the higher middle-class I.Q. The fact that the underprivileged child has been immersed in an early "impoverished" environment in which there is insufficient stimulation, thus producing a basic retardation, so that, in effect, his I.Q. remains relatively low throughout life.²⁰ In some cases the early

¹⁸Edward R. Fagan, English and the Disadvantaged, (Pennsylvania: 1967) p. 49.

¹⁹Fagan, English, p. 29.

²⁰Riessman, Culturally Deprived, p. 57.

environment of the deprived child produces behavior similar to that sometimes found in institutional children, and in children brought up in isolation from society. This stimulus deprivation thesis presumes that the underprivileged child has suffered some similar lack of stimulation over a long period of time, particularly in his early life, and this accounts for his low I.Q.

Recent research has demonstrated that for children growing up under adverse circumstances the I.Q. may be depressed by a significant amount and that intervention at certain points can raise the I.Q. by as much as ten to fifteen points.

The child from the culturally deprived home comes to school with an interest in the new experiences but without some of the experiences, skills, and values typical of the middle-class child. The culturally deprived child has some special difficulties because the school learning environment and materials are so very different from the settings which are familiar to him.

The lower-class child enters the school situation so poorly prepared to produce what the school demands that initial failures are almost inevitable, and the school experience becomes negatively rather than positively reinforced. Often these children are subjected to feelings of inadequacy and shame because of their lack of necessary clothing.²¹

²¹Reissman, Culturally Deprived, p. 58.

The fact that an impoverished environment and the climate of deprivation that many children live in can cause mental retardation has pretty well been established. This theory holds that childhood performance on a level of retardation may take place at least temporarily because of a lack of "intellectual vitamins" and by adverse psychosocial conditions constantly confronting the small child. Obviously, this type of mental retardation, caused by deprived environmental factors, could be largely prevented if we could find ways to provide the missing cultural and educational experiences early enough in life.

Now that we know the source of our problem, our task is to find a workable solution that will correct it. This is indeed a challenge--but not one that is unattainable. Even today, steps are being taken to reach this goal. But to coin an old adage, "the hope of the future lies in our hands."

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